

PENT COOPERATION TREA

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION
(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
 Office
 Box PCT
 Washington, D.C.20231
 ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 01 December 1999 (01.12.99)	To: Assistant Commissioner for Patents United States Patent and Trademark Office Box PCT Washington, D.C.20231 ÉTATS-UNIS D'AMÉRIQUE in its capacity as elected Office
International application No. PCT/ZA99/00005	Applicant's or agent's file reference PCT/1999/001
International filing date (day/month/year) 19 March 1999 (19.03.99)	Priority date (day/month/year) 19 March 1998 (19.03.98)
Applicant MOSTERT, Christiaan, Frederik, du Toit et al	

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

18 October 1999 (18.10.99)

in a notice effecting later election filed with the International Bureau on:

2. The election was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Juan Cruz Telephone No.: (41-22) 338.83.38
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The process of logging into an ISP and subsequently being granted access to a web site for downloading information from the site, is tedious and in most cases time-consuming. Furthermore, most users access the Internet during business hours, which is the time when telephone costs are most expensive.

The Internet typically forwards information on a "pull" system which is facilitated by a dial-up connection. The current "Push" system does not allow large quantities of information to be provided to multiple users, due to the limitation of the telecommunications network.

A present dial-up connection to the Internet allows the user to request the service provider to transmit large amounts of information satellite, to avoid lengthly download times. However, the transmission has to be requested by the user and the information is independently sent by the service provider to a specific user for each request.

OBJECTIVES OF THE INVENTION

Accordingly, it is an object of the present invention to provide a system and method for simultaneously broadcasting large quantities of information over the airwaves to a plurality of receivers, as well as for downloading information at a user base with which the above disadvantages of known systems could at least be alleviated.

Furthermore, it is an object of the invention to provide users with a system that may enable and/or facilitate one or more of the following:

- product delivery systems – these are orders placed via the Internet or otherwise for data based products, such as software, which can be delivered effortlessly without time-consuming and costly Internet downloads. The sale of music CD's is a perfect application for the invention as a product delivery system;
- mail delivery notification – alerting the user to the presence of new mail. While

Figure 5: is a block diagram illustrating a system of switches for implementing the selective distribution of information to subscribers, according to the invention.

BEST MODES FOR CARRYING OUT THE INVENTION

Figure 1 shows an embodiment of a system 10 according to the invention, which uses a radio frequency transmitter 12 for distributing information to user bases 14, from one or more content providers 16, which could be an Internet service provider, university or commercial institution such as a firm of stock brokers, magazine company, news network or software developer. Users subscribe or register themselves with a content provider 16 at a fee. The content providers prepare the information to be distributed to their subscribers and forward it to a service provider 18 that manages and classifies the data to be transmitted. Existing transmission infrastructure 12, such as that used by radio companies, is used to broadcast the channels of information. At the user base 14, a PC-based receiving station, comprising an antenna 20, a specialised receiver card in the form of a radio card (not shown) and processing and storage means (not shown), is used to receive, demodulate, process and store the incoming information signal. Downloads are stored and automatically refreshed with up-to-date information. This information is retrieved by the user, and manipulated with appropriate software, such as conventional Internet browsers, customized software packages or applets.

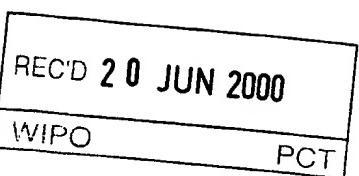
Figure 2 relates, specifically, to the transmission of information to multiple users via a cellular network including one or more service providers 18, which are connected to a cellular network operator 30, and one or more content providers 16. The cellular network operator 30 has multiple transmission areas serviced by base stations 32. At the user base 14, a remote terminal, such as a PC, is equipped with receiver means for receiving the cellular transmission. As in the case of RF broadcasting, the downloaded information is viewed on display means and manipulated with peripheral devices such as a keyboard and/or mouse.

It will be appreciated that certain embodiments of the invention have been described herein and that other embodiments, variations or modifications should therefore be understood to fall within the spirit and scope of the invention as claimed hereafter.

CLAIMS

1. A system for the simultaneous transmission of information to multiple users over a wireless communications network and for receiving, demodulating, downloading and storing the information at user bases, the system comprising at least one content provider; at least one service provider; a transmission infrastructure; multiple user bases, having receivers consisting of an antenna in conjunction with a receiver card; a modem for demodulating the broadcast signal; and processing means for storing and enabling subsequent retrieval of the information.
2. A system according to claim 1 including at least one switchable channel to be broadcast selectively to a subset of users and permitting the activation and or deactivation of a specific channel of information.
3. A system according to claim 1 or 2 including means for encoding the information signal prior to transmission.
4. A system according to claim 1 or 2 including means for encrypting the information signal prior to transmission.
5. A system according to any one of the preceding claims wherein the means for encrypting is a function of the user-specific identification code inherent in the receiver card and a key obtained by the user on payment of the channel subscription.
6. A system according to any one of the previous claims wherein the receiver has an antenna operatively associated therewith.
7. A system according to any one of the preceding claims including means for compressing the information signal prior to transmission and means for decompressing the information after it has been downloaded.
8. A system according to any one of the preceding claims where the transmission network is a radio network.
9. A method for facilitating the simultaneous transmission of information to multiple user bases over a wireless communications network and for receiving, demodulating, downloading, and storing the information at the user bases for subsequent retrieval, the method including the steps of collecting information from at least one content provider; classifying and grouping the information into channels; generating a modulated information signal for transmission; broadcasting the modulated

- information signal over a wireless transmission network; receiving the transmitted information signal at user bases via suitably tuned receivers; demodulating the received information signal; and storing the information for subsequent retrieval.
10. A method according to claim 9 including the step of automatically refreshing the stored information with an updated version.
 11. A method as claimed in claim 9 or 10 including the step of activating certain channels according to a subscriber's status using software switches at the transmitter.
 12. A method as claimed in claim 9 or 10 including the step of activating certain channels according to a subscriber's status by encrypting information as a function of a user-specific identification code.
 13. A method as claimed in any one of claims 9 to 12 wherein the step of modulating the information signal is achieved by using any one or more of modulation techniques selected from the group consisting of Gaussian Minimum Shift Keying (GMSK), Quadrature Polyphase Modulation (QPM) and Galaxy Modulation.
 14. A method as claimed in claim 13 where the modulation technique includes a redundancy check.



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

16

Applicant's or agent's file reference PCT/1999/001	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/ZA99/00005	International filing date (day/month/year) 19/03/1999	Priority date (day/month/year) 19/03/1998	
International Patent Classification (IPC) or national classification and IPC H04L12/28			
Applicant MOSTERT, Christiaan, Frederik, du Toit et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 18/10/1999	Date of completion of this report 16.06.2000
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Snell, T Telephone No. +49 89 2399 8802



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/ZA99/00005

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1,3-5,7 as originally filed

2,2a,6,8 with telefax of 19/05/2000

Claims, No.:

1-14 with telefax of 19/05/2000

Drawings, sheets:

1/5-5/5 as originally filed

2. The amendments have resulted in the cancellation of:

- the description, pages:
 the claims, Nos.:
 the drawings, sheets:

3. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

see separate sheet

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/ZA99/00005

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims 1-14
	No:	Claims
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-14
Industrial applicability (IA)	Yes:	Claims 1-14
	No:	Claims

2. Citations and explanations

see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/ZA99/00005

Re Item I

Basis of the opinion

1. The amendment to the description on page 6 "transmitting the information by any previously known method" adds matter going beyond the contents of the application as originally filed, in contravention of Article 34(2)(b) PCT.

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The invention appears to be directed at the wireless broadcasting of web pages; the wording of claim 1 is however so general that it can essentially be read onto any known digital broadcasting system, eg RDS, or satellite digital radio or television etc.

The only difference over such prior art digital broadcasting systems lies in the fact that the information to be broadcasted comes from content providers via an Internet service provider. However, the mere idea of linking an Internet service provider to a digital broadcasting system alone does not involve an inventive step, since broadcasting of information from whatever source to many users is an obviously desirable aim. Although the technical realisation could potentially be non-obvious, eg a protocol for the broadcasting of web pages over a wireless network, in the present application absolutely no technical details beyond standard features of a digital broadcasting system are disclosed, allowing no scope for the recognition of an inventive step.

The subject-matter of claim 1 therefore does not involve an inventive step having regard to the common general knowledge of a person skilled in the art (Articles 33(1) and (3) PCT).

2. The same objection applies corresponding method claim 9 (Articles 33(1) and (3) PCT).
3. The additional feature of claim 2 is well known in the field of satellite television.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/ZA99/00005

The additional features of dependent claims 3-8 and 10-14 are also well known in this field. None of the dependent claims therefore add matter of inventive significance to either independent claim 1 or 9 (Articles 33(1) and (3) PCT).

Re Item VIII

Certain observations on the international application

1. The two independent claims 1 and 9 lack consistency with each other, since claim 9 refers to "classifying and grouping the information into channels", but claim 1 includes no corresponding feature. These claims are therefore inconsistent regarding the definition of the essential features of the invention, leading to a lack of clarity of the claims as a whole (Article 6 PCT).

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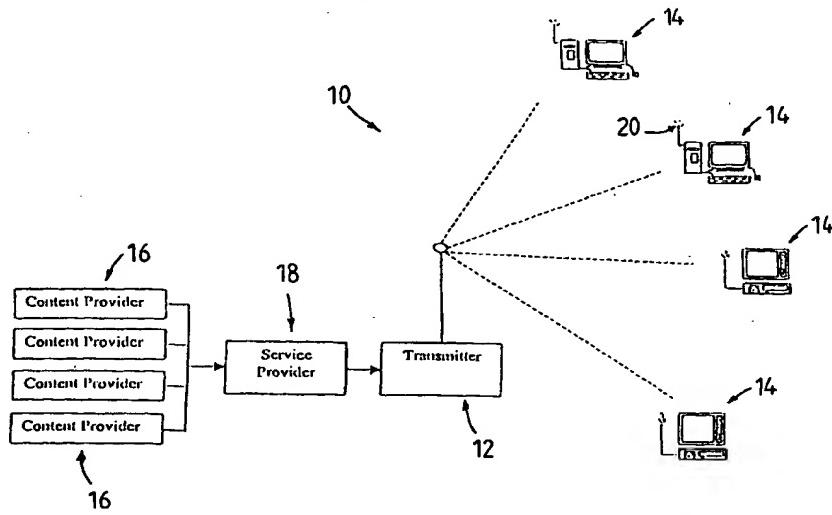


RPT

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04L 12/28, G06F 1/00	A1	(11) International Publication Number: WO 99/48250 (43) International Publication Date: 23 September 1999 (23.09.99)
(21) International Application Number: PCT/ZA99/00005		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
(22) International Filing Date: 19 March 1999 (19.03.99)		
(30) Priority Data: 98/2302 19 March 1998 (19.03.98) ZA 99/1811 8 March 1999 (08.03.99) ZA		
(71)(72) Applicant and Inventor: MOSTERT, Christiaan, Frederik, du Toit [ZA/ZA]; No. 5 Valley Road, Westcliff, Johannesburg 2193 (ZA).		
(72) Inventors; and		
(75) Inventors/Applicants (for US only): HIGGINSON, David, Charles [ZA/ZA]; 49 Joseph Avenue, Northcliff, Johannesburg 2115 (ZA). HIGGINSON, Martin, Roy [ZA/ZA]; 52 Bianca Avenue, Berario, Johannesburg 2195 (ZA). NEL, Pierre, Hercules [ZA/ZA]; 502 Tennessee Street, Faerie Glen, Pretoria 0043 (ZA).		
(74) Agent: D.M. KISCH INC.; P.O. Box 781218, Sandton 2146 (ZA).		

(54) Title: METHOD AND SYSTEM FOR DISTRIBUTING INTERNET TO MULTIPLE USERS



(57) Abstract

The invention provides a system and method for transmitting information to multiple users simultaneously, over a wireless communications network, and for receiving, demodulating, downloading and storing the information at user bases, for access at any future time. The system comprises: one or more content providers (16), such as a news company, stock brokerage firm, Internet service provider, publisher or university; one or more service providers (18) that manage the information into channels; existing wireless transmission infrastructure (12), for example, that used by radio companies, and; a plurality of PC-based receivers (14) at user bases. The user base typically comprises an antenna (20), in conjunction with a specialised radio card designed to implement modulation techniques such as GMSK, QPM and Galaxy Modulation; a modem for demodulating the broadcast signal, and; processing means, such as a personal computer.

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EE	Estonia						

INTERNATIONAL SEARCH REPORT

International Application No
PCT/ZA 99/00005

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 H04L12/28 G06F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04L G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 794 642 A (NOKIA MOBILE PHONES LTD) 10 September 1997 (1997-09-10) abstract column 1, line 1 - column 2, line 28 column 7, line 20 - line 43 figures 2,3,5,8,10,11 -----	1,6, 8-10,13
Y	WO 98 02793 A (ALLIED SIGNAL INC) 22 January 1998 (1998-01-22) abstract page 13, line 5 - page 17, line 9 claims 1-3; figure 1 -----	2-4,7, 11,12,14
Y		2-4,7, 11,12,14

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

12 July 1999

Date of mailing of the international search report

20/07/1999

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/ZA 99/00005

Patent document cited in search report	Publication date		Patent family member(s)		Publication date
EP 0794642 A	10-09-1997	FI	960894 A		27-08-1997
WO 9802793 A	22-01-1998	EP	0910821 A		28-04-1999